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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/843,396

04/26/2001

Stefan Dutzmann

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11/23/2010

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EXAMINER

CHOI, FRANK I

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

11/23/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/843,396	Applicant(s) DUTZMANN ET AL.	
	Examiner FRANK I. CHOI	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-16, 18-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-16 and 18-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/402,866.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/8/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/8/2010 has been entered.

Claim Rejections - 35 USC §103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-16, 18-30 are rejected under 35 U.S.C. 103(a) as being obvious over WO 96/16048.

The invention is directed to a fungicidal composition comprising effective amounts or synergistically effective amounts of prothioconazole and tebuconazole in a specified ratio range and application to the fungi or fungi's habitat.

WO 96/16048 discloses the combination of prothioconazole with other fungicides, including tebuconazole, for treatment of fungal infections, including Erysiphe species, Puccinia species and Fusarium species, to widen the spectrum of action, to prevent build of resistance and that the activity of the mixture in many cases exhibits synergistic activity and that the formulations are prepared in a known manner, for example by mixing the active compounds with surfactants and extenders, and that application concentrations of the active compounds depend

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on the nature and occurrence of the microorganisms to be controlled and on the composition of the material to be protected and the optimum amount to be employed can be determined by a series of tests, including 250, 125 and 25 g/ha (see entire reference, especially, Page 40, Pg. 42, lines 11-15, Pg. 43, lines 15-30, Pgs. 44, 47, 56-67).

WO 96/16048 discloses that prothioconazole can be combined with other fungicides, including tebuconazole, and the combination can be synergistic. The difference between WO 96/16048 and the claimed invention is that WO 96/16048 does not expressly disclose the combination of prothioconazole with tebuconazole. However, the prior art amply suggests the same as WO 96/16048 discloses the combination of prothioconazole with other fungicides, including tebuconazole, and that the combinations can be synergistic. As such, it would have been well within the skill of and one of ordinary skill in the art would have been motivated to combine prothioconazole with tebuconazole with the expectation that the combination would be more effective than each alone.

“It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art.” *In re Kerkhoven*, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be prima facie obvious.). See also *In re Crockett*, 126 USPQ 186 (CCPA 1960) (Claims directed to a method and material for treating cast iron using a mixture comprising calcium carbide and magnesium oxide were held unpatentable over prior art disclosures that the aforementioned components individually promote

the formation of a nodular structure in cast iron.); and *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992) (mixture of two known herbicides held prima facie obvious).

The Examiner has duly considered Applicant's arguments but deems them unpersuasive.

The Supreme Court in *KSR International Co. v. Teleflex Inc.*, held the following:

(1) the obviousness analysis need not seek out precise teachings directed to the subject matter of the challenged claim and can take into account the inferences and creative steps that one of ordinary skill in the art would employ;

(2) the obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents;

(3) it is error to look only the problem the patentee was trying to solve-any need or problem known in the field of endeavor at the time of invention and addressed by the prior art can provide a reason for combining the elements in the manner claimed;

(4) it is error to assume that one of ordinary skill in the art in attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem-common sense teaches that familiar items may have obvious uses beyond their primary purposes, and in many cases one of ordinary skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle (one of ordinary skill in the art is not automaton);

(5) it is error to assume that a patent claim cannot be proved obvious merely by showing that the combination of elements was "obvious to try". *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396, 1397 (U.S. 2007).

Contrary to the Applicant's arguments, *In re Kerkhoven* and *In re Crockett* are on point. Both prothioconazole and tebuconazole are disclosed in the cited reference to be known

fungicides and their combined use in the treatment of fungal infections on crops is suggested by the cited reference. Furthermore, the Applicant's evidence of synergy is not sufficient to overcome the prior art rejection as the cited reference discloses that the combinations can be synergistic. As such, synergy is not unexpected.

The Applicant uses the Colby equation calculations as evidence of synergy. However, the Colby equation is not a reliable measurement of synergy. See Rummens, page 5 (Colby equation can create an antagonism where none is present). Further, the Specification does not appear to show trend in the data that would allow one of ordinary skill in the art to extend the probative value thereof. See *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980). Except for Example 1, none of the other examples provide efficacy data for the amounts used in the mixture applied in the same amount individually for both prothioconazole and tebuconazole. As such, it cannot be determined from those examples whether the amounts used in the mixture were synergistic. In Example 5 (treatment of Erysiphe infection on wheat), the efficacies of prothioconazole at 25, 12.5 and 6.25 g/ha were 75, 50 and 25%, respectively and the efficacy of tebuconazole at 25 g/ha was 88%. Since the maximum efficacy that a combination of said agents at the amounts indicated could not exceed %100, the data provided in fact provides evidence that the combination of prothioconazole and tebuconazole at the ratio of 1:1 to 1:3 is not synergistic. With respect to example 1 (pretreatment of cucumber prior to inoculation with *Sphaerotheca*), at an application rate of 2.5 g/ha for each agent, the actual efficacy for the mixture was 85% with the efficacies of the agents applied individually adding up to 71%. Since there is no indication as to the number of trials and/or number of plants treated, or statistical analysis of the values (the Examiner assumes that the values are averages), it does not appear

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that the value of 85% is significantly greater than 71%. As such, the data provided by the Applicant is not sufficient to show synergy at the ratio of 1:1 to 1:3 much less the entire range.

The data in the Specification, in addition to the above, shows that efficacy data can vary depending on a number of factors, including amount applied, fungi, treatment or pretreatment and/or habitat treated. For example, the efficacy at 25 g/ha of prothioconazole and tebuconazole varied from 75% and 88%, respectively in treatment of Erysiphe infection on wheat to 19% and 27%, respectively in treatment of Rhizoctonia solani infection on cotton seeds (See Example 5 and Example 11). As such, in view of the above, as the claims encompass treatment of any fungi, any amount and/or pre-treatment of any fungi's environment, even if the data was sufficient to show unexpected activity, the evidence is not commensurate in scope with the claimed invention.

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the cited reference and the acknowledged prior art.

Conclusion

A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier number for accessing the facsimile machine is 571-273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (571)272-0610. The Examiner maintains a flexible schedule, however, the Examiner may generally be reached Monday, Tuesday, Wednesday and Thursday, 6:00 am – 4:30 pm (EST).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Johann R. Richter, can be reached at (571)272-0646. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank Choi
Patent Examiner
Technology Center 1600
November 22, 2010

/Johann R. Richter/
Supervisory Patent Examiner, Art Unit 1616